

What is claimed is:

1. An electrical connector box comprising:

a housing;

a plurality of bus bars press fit into said housing, wherein each bus bar includes a connector band and a plurality of bus bar tabs extending therefrom at first uniform intervals and each bus bar is press fit into the housing so as to extend in a vertical Y-axis direction and the plurality of bus bars are spaced from each other at second uniform intervals along a horizontal X-axis direction substantially perpendicular to the vertical Y-axis direction;

a plurality of block connectors configured to hold a plurality of female terminal connectors attached to the ends of wires, each block connector including a single row of terminal sockets, each terminal socket having a female terminal connector inserted and locked therein; and

a holder joined to said housing, said holder including a plurality of partition walls dividing the internal space of said holder and defining a plurality of vertically stacked receptacles therein, each receptacle configured to receive a block connector therein;

wherein each said block connector is individually positioned in one of said vertically stacked receptacles within said holder so that said bus bar tabs are positioned in and joined to respective female terminal connectors in said block connectors.

2. The electrical connector box according to claim 1,

said housing including a base plate having an interior surface facing said holder and a plurality of recesses provided in said interior surface, said bus bars press fit into said recesses.

3. The electrical connector box according to claim 2, said electrical connector box further comprising:

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lock tabs provided on external surfaces of opposite sidewalls of said holder; and  
latch frames extending from edges of said housing base plate, wherein said lock tabs engage respective said latch frames to lock said housing and said holder together.

4. The electrical connector box according to claim 1, said electrical connector box further comprising:

lock tabs provided on external surfaces of opposite sidewalls of each said block connector; and

lock slots extending along opposite sidewalls of each said receptacle, wherein said lock tabs engage respective said lock slots to lock each said block connector in a respective said receptacle.

5. The electrical connector box according to claim 1,

said holder including a rear wall having an exterior surface facing said housing and a plurality of terminal connector access ports provided in said exterior surface facing said housing, each said terminal connector access port configured to receive therein one of said bus bars tabs and a continuity test probe.

6. The electrical connector box according to claim 2, where each said bus bar includes a plurality of insertion prongs extending therefrom, each said insertion prong press fit into a respective said recess formed in said interior surface of said housing base plate.

7. The electrical connector box according to claim 1,

said housing including a base plate having a surface facing said holder and a holder support frame extending from each corner of said housing base plate; and

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brackets provided on external surfaces of walls of said holder, wherein said holder support frames engage respective said brackets to position said housing and said holder together.

8. The electrical connector box according to claim 1, said electrical connector box further comprising:

a plurality of divider walls provided in said internal space of said holder defining a top row of horizontally stacked terminal receptacles, each terminal receptacle configured to receive a female terminal connector therein.

9. The electrical connector box according to claim 1, wherein said first uniform intervals between said bus bar tabs and said second uniform intervals between said bus bars are substantially equal.

10. A method of assembling an electrical connector box, said electrical connector box including a housing and a plurality of bus bars press fit into said housing, wherein each bus bar includes a connector band and a plurality of bus bar tabs extending therefrom at first uniform intervals and each bus bar is press fit into the housing so as to extend in a vertical Y-axis direction and the plurality of bus bars are spaced from each other at second uniform intervals along a horizontal X-axis direction substantially perpendicular to the vertical Y-axis direction, a plurality of block connectors configured to hold a plurality of female terminal connectors attached to the ends of wires, each block connector including a single row of terminal sockets, and a holder configured to be joined to said housing, said holder including a plurality of partition walls dividing the internal space of said holder and defining a plurality of vertically stacked receptacles therein, each receptacle configured to receive a block connector therein, said method comprising:

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inserting said female terminal connectors with wires attached thereto into said block connectors;

inserting each said block connector into one of said vertically stacked receptacles in said holder;

inserting a continuity test probe into each said terminal socket of said block connectors and conducting a continuity test; and

joining and locking said holder to said housing.

11. The method of assembling an electrical connector box according to claim 10, wherein said housing includes a base plate having an interior surface facing said holder and a plurality of recesses provided in said interior surface, said method further comprising:

press fitting said bus bars into said recesses.

12. The method of assembling an electrical connector box according to claim 11, the electrical connector box further including lock tabs provided on external surfaces of opposite sidewalls of the holder and latch frames extending from edges of the housing base plate, said method further comprising:

engaging said lock tabs and respective said latch frames to lock said housing and said holder together.

13. The method of assembling an electrical connector box according to claim 11, wherein each bus bar includes a plurality of insertion prongs extending therefrom, said method further comprising:

press fitting each said insertion prong into a respective said recess formed in the interior surface of said housing base plate.

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14. The method of assembling an electrical connector box according to claim 10, the electrical connector box further including lock tabs provided on external surfaces of opposite sidewalls of each block connector and lock slots extending along opposite sidewalls of each receptacle, said method further comprising:

engaging said lock tabs and respective said lock slots to lock each said block connector in a respective said receptacle.

15. The method of assembling an electrical connector box according to claim 10, said housing including a base plate having a surface facing the holder and a holder support frame extending from each corner of said housing base plate and brackets provided on external surfaces of walls of said holder, said method further comprising:

engaging said holder support frames and respective said brackets to position said housing and said holder together.